UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,105	03/23/2004	Toru Okada	1075.1255	1845

21171 7590 10/18/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
JARRETT, RYAN A	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,105	OKADA ET AL.	
	Examiner	Art Unit	
	Ryan A. Jarrett	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2005 and 30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6 and 8-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6 and 8-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/31/05 has been entered.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 33 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application

producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

The claims are directed to a method that does not require computer-implementation or use of technology to accomplish. The claims allow for the involvement of subjective human decision and therefore do not necessarily produce repeatable, concrete results.

Essentially, since the claimed method can be performed using only "pencil and paper", the claim is non-statutory.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 4, 6, 8-22, and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mateau et al. US 2004/0064211 in view of Beauchesne US 5,777,876.

Regarding claims 1, 4, 6, 8-20, 22, and 29-33, Mateau et al. discloses:

1. A design support system, method, and program for supporting design of a manufacturing line for a tooling assembly constituted by combination of a plurality of element types of manufacturing cells, said system comprising: an element type database for storing information about said element types beforehand (e.g., [0007], [0016], [0041], [0052]); an indication section which indicates to an operator in selectable manner said element types stored in said element type database (e.g., [0007], [0016], [0041],

[0052]); a selection section enabling section of arbitrary element types to be used for constituting said manufacturing line from among said element types indicated by said indication section (e.g., [0007], [0016], [0041], [0052]); an element type determination section for determining said element types or specifications of said element types based on said element types selected by said selection section (e.g., [0031], [0046], [0056]); a manufacturing line information preparation section for preparing information about said manufacturing line by acquiring information about said element types stored in said element type database based on said element types selected by said selection section (e.g., [0050]); and an output section outputting information about said manufacturing line prepared by said manufacturing line information preparation section (e.g., [0050]), wherein said manufacturing line information preparation section prepares information about said manufacturing line based on said element types or said specifications of said element types determined by said element type determination section, said element type database stores determination information in association with said element types, and said element type determination section determines said element types or specifications of said element types based on said determination information, and said determination information is at least one of a conditional expression having information pertaining to another constituent element or element type complying with the selected element type, which would otherwise be caused when a first element type has been selected, and an incidental expression having information to be used for preventing reflection of information about a specific constituent element or element type in response to the selected element type, which would otherwise be caused when a second element type has been selected (e.g., [0031], [0046], [0056]).

4. The design support system according to claim 1, wherein said element type database stores manufacturing steps (processes and devices) employed in said manufacturing line, in association with element types relevant to said manufacturing steps (e.g., [0017], [0039], [0051], [0059]-[0061]).

6. The design support system according to claim 4, wherein said element type database hierarchically manages said manufacturing steps (e.g., [0017], [0039], [0051], [0059]-[0061).

8. The design support system according to claim 1, further comprising a component database which stores information about components constituting said element types (e.g., [0007], [0043], [0046]-[0048], [0053]).

9. The design support system according to claim 4, further comprising a component database which stores information about components constituting said element types (e.g., [0007], [0043], [0046]-[0048], [0053]).

10. The design support system according to claim 6, further comprising a component database which stores information about components constituting said element types (e.g., [0007], [0043], [0046]-[0048], [0053]).

11. The design support system according to claim 8, wherein said component database performs sorting and extraction of information about said components registered in said component database while taking predetermined conditions as a key (sorting and extracting based on database parameters or "keys" is an inherent function of all databases, including the database of [0007], [0043], [0046]-[0048], [0053]).

12. The design support system according to claim 9, wherein said component database performs sorting and extraction of information about said components registered in said component database while taking predetermined conditions as a key (sorting and extracting based on database parameters or "keys" is an inherent function of all databases, including the database of [0007], [0043], [0046]-[0048], [0053]).

13. The design support system according to claim 10, wherein said component database performs sorting and extraction of information about said components registered in said component database while taking predetermined conditions as a key (sorting and extracting based on database parameters or "keys" is an inherent function of all databases, including the database of [0007], [0043], [0046]-[0048], [0053]).

14. The design support system according to claim 8, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

15. The design support system according to claim 9, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

16. The design support system according to claim 10, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

17. The design support system according to claim 11, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

18. The design support system according to claim 12, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

19. The design support system according to claim 13, further comprising information about an engineering drawing of said components in association with said components, wherein said output section outputs information about an engineering drawing of said components (e.g., [0050]).

20. The design support system according to claim 1, further comprising: information about the appearance of said element types; and an appearance information preparation section for preparing information about the appearance of said manufacturing line on the basis of information about the appearance of said element types, wherein said output section outputs information about the appearance of said manufacturing line prepared by said appearance information preparation section (e.g., [0050]).

22. The design support system according to claim 1, further comprising: a condition input section which enables input of conditions pertaining to preparation of information about said manufacturing line be prepared by said manufacturing line information preparation section, wherein said manufacturing line information preparation section selectively uses said plurality of element types on the basis of information about said element types stored in said element type database, thereby preparing information about said manufacturing line satisfying said conditions input by said condition input section (e.g., [0007], [0016], [0031], [0041], [0046], [0052], [0056]).

29. The design support system according to claim 1, wherein information pertaining to said element types stored in said element type database comprises at least any of a manufacturing unit price, a delivery time, accuracy, a processing time, visual information, and comment (e.g., [0050]-[0051], [0058]), all pertaining to said element types.

30. The design support system according to claim 1, wherein information about said manufacturing line is information pertaining to performance or a manufacturing cost of said manufacturing line (e.g., [0050]-[0051], [0058]).

Mateau et al. discloses a system for supporting design of a manufacturing line for a tooling assembly where the manufacturing line is constituted by combination of a plurality of element types of manufacturing cells. Mateau et al. does not disclose that the "tooling assembly" is for manufacturing electronic devices. However, it is clear that the design methodology of Mateau et al. can be applied to a variety of different types of manufacturing lines, including manufacturing lines that assemble electronic devices.

Beauchesne discloses a database manufacturing process management system for supporting design of a manufacturing line for an electronic device where the manufacturing line is constituted by a combination of a plurality of element types of manufacturing cells.

Mateau et al. and Beauchesne are analogous art since both pertain to systems for supporting design of manufacturing lines constituted by a plurality of element types of manufacturing cells.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mateau et al. with Beauchesne since it is apparent that the basic principles of the database design support system of Mateau et

al. can conceivably be applied to a variety of different types of manufacturing lines, without departing from the true spirit of the Mateau et al. invention. And since Beauchesne teaches that facilities for manufacturing electronic devices are well suited to database design support systems that optimize the relationships between the manufacturing line element types, or manufacturing cells, since such facilities often have a large complement of different kinds of equipment partitioned into several different manufacturing lines located within large factory spaces for manufacturing a large number of different products (e.g., col. 1 line 10 – col. 2 line 2).

Regarding claim 21, Beauchesne additionally discloses:

21. A design support system comprising a manufacturing line information storage section which can store a plurality of pieces of information about said manufacturing line prepared by a manufacturing line information preparation section and which can extract and arrange said plurality of pieces of information about said manufacturing line under arbitrary conditions on the basis of details of said information about said manufacturing line; and a line candidate indication section for indicating said extracted and arranged information about said manufacturing line as a candidate for said manufacturing line (e.g., col. 2 line 25 – col. 4 line 7, col. 14 lines 10-41, col. 16 lines 23-41).

7. Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mateau et al. in view of Beauchesne as applied to claims 1 and 8 above, and further in view of Fischer et al. U.S. 2004/0158340. Mateau et al. in view of Beauchesne does not disclose an external information processing system for managing manufacturing costs and purchases of the manufacturing line, wherein the output section outputs said

information about the manufacturing costs of the manufacturing line. However, Fischer et al. discloses a design support system comprising:

23. A data exchange section capable of exchanging data with an external information processing system (e.g., [0070], [0075], [0077], [0105]).

24. The design support system according to claim 23, wherein said external information processing system is a system for managing manufacturing costs of said manufacturing line; said data exchange section acquires from said external information processing system information about manufacturing costs of said manufacturing line; and said output section outputs said information about said manufacturing line prepared by said manufacturing line information preparation section and said information about manufacturing costs of said manufacturing line data exchange section in such a manner that acquired by said pieces of information can be compared with each other (e.g., [0070], [0075], [0077], [0105]).

25. The design support system according to claim 23, wherein said external information processing system is a purchasing system, and said data exchange section transfers, to said purchasing system, said information about said manufacturing line prepared by said manufacturing line information preparation section (e.g., [0111], [0116], [0124]).

26. The design support system according to claim 24, wherein said external information processing system is a purchasing system, and said data exchange section transfers, to said purchasing system, said information about said manufacturing line prepared by said manufacturing line information preparation section (e.g., [0111], [0116], [0124]).

27. The design support system according to claim 8, further comprising computing at least the number of components required to constitute said manufacturing line as information about said manufacturing line on the basis of said information about components constituting said element types stored in said component database (e.g., [0070], [0075], [0077], [0105], [0111], [0116], [0124]).

28. The design support system according to claim 27, further comprising a data exchange section exchanging data with an external information processing system, wherein said data exchange

section transfers at least the number of components required to constitute said manufacturing line to said external information processing system (e.g., [0070], [0075], [0077], [0105]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mateau et al. in view of Beauchesne with Fischer et al. since Fischer et al. teaches that such a data exchange results in reductions to the cost and shortening of the schedule to design, configure, order and manufacture an injection molding system (e.g., [0111]).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan A. Jarrett
Examiner
Art Unit 2125

10/15/05
RAJ

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100